



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D5359-041
Job Sheet 168637



Part No: D5359-041

Job Qty: 6 Ea

Part Name: Strut Assembly, LH/RH



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 11/20/17

Job Tracking No:

Created By: Mario Poulin

Due Date: 11/22/17

Type: SOLD

Description:

Note: DWG REV B SHEETS 1,2,3 IPP Rev: A RQ 16.03.23 Verified by: DD IPP REV:B 17.01.20 AS PER REV.B DD
VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea	11/18/17	11/18/17	0.00	0.00	Start Up Container		DE 2017-11-21
110	Small Fab	6 pcs	11/20/17	11/20/17	0.00	4.72	Small Fab		DE 2017-11-21
112	CNC Bend Skidtubes	6 pcs	11/20/17	11/20/17	0.59	5.77	CNC Bend Crosstube		
114	Small Fab	6 pcs	11/20/17	11/20/17	0.00	4.72	Small Fab		MU DAS
120	QC	6 pcs	11/20/17	11/20/17	0.00	0.00	QC5		38
130	Mill Conv	6 pcs	11/21/17	11/21/17	0.00	6.85	Mill Conv 1		J.E.L. 9-89 17-11-22
140	QC	6 pcs	11/21/17	11/21/17	0.00	0.00	QC2		J.E.L. 17-11-22
150	QC	6 pcs	11/21/17	11/21/17	0.00	0.00	QC8		22mL 17/11/22
160	Powdercoat	6 pcs	11/21/17	11/21/17	0.00	1.12	Powdercoat2		BL 17-11-22
170	QC	6 pcs	11/21/17	11/21/17	0.00	0.00	QC3		38
180	Small Fab	6 pcs	11/21/17	11/21/17	0.00	4.72	Small Fab		17-11-23 OK
190	Mill Conv	6 pcs	11/21/17	11/21/17	0.00	6.85	Mill Conv 1		J.E.L. 17-11-23
200	QC	6 pcs	11/21/17	11/21/17	0.00	0.00	QC5		17-11-23 OK
210	Small Fab	6 pcs	11/22/17	11/22/17	0.00	4.72	Small Fab		17-11-23 OK
220	QC	6 pcs	11/22/17	11/22/17	0.00	0.00	QC5		9-89
230	Packaging	6 pcs	11/22/17	11/22/17	0.00	0.00	Packaging3		57370
240	QC21-SA	6 Ea	11/22/17	11/22/17	0.00	0.00	QC21		NOV 23 2017

Part Op 110 - 1- CUT SQUARE TUBING AT 48.00"

Descriptions: 112 - 1- FORM TUBING AS PER DWG USING DT10300 USING CNC BENDER 100 AND FOLIO 32 BEND PROG D5359.

114 - 1- TRIM OFF EXTRA MATERIAL USING DT10300 2- DEBURR

130 - 1- DRILL HOLES IN BOTH ENDS OF TUBE AS PER DWG 2- DEBURR

160 - START TIME: 1:45 OVEN TEMPERATURE: 400 FINISH TIME: 2:15

180 - 1- ASSEMBLE INSERT IN TUBE AS PER DWG ***DO NOT INSTALL CLEVIS***

190 - 1- DRILL WITNESS HOLES TRUE BOTH WALLSW AS PER DWG, SHEET 2, DETAIL A AND VIEW B-B 2- DEBURR

210 - ASSEMBLE CLEVIS AND NUT AS PER DWG

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M304TS0.750W.049	20	1,367	0	0
180-Small Fab	AN3CH11A	12	16	0	0
	AN3CH12A	12	20	0	0
	D5359-3	12	4	0	0

DQA: _____ Date: _____

QA Closed: _____ Date: _____

ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

Date : _____

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐Shining ☐Cross tube ☐Small Fab ☐Finishing ☐Composite ☐Water Jet ☐Prod. Eng. Coord. ☐Rec/Store/Packaging ☐Supplier ☐Engineering ☐Quality ☐Other ☐

MRB (QSI042) Approval

Completed By

Lead hand / Supervisor
Approval VerificationQC / QA Coordinator
Approval

Dart Aerospace Ltd.
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Hawkesbury, ON K6A 1K7
CANADA
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Email: sales@dartaero.com
www.dartaerospace.com

PART NO:
Revision:
Operation:
Page No:

S011932
Strut Assembly, LH/RH

D5359-041

Start up Operation

Mfg Date: 11/21/17
Job No: 168637

Root Cause

Environment	☐	No Re-verification	☐	Pressure/Forced	☐
Design	☐	Operator	☐	Bending	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐
Material	☐	Use for Testing	☐	Cuffs	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐
Past Expiry Date	☐	Manufacturing Process	☐		
Misidentified	☐	Past Due	☐	OTHER :	☐

CATEGORY

☐	Power Loss/Surge	☐	Positioned Wrong
☐	Folio/Program	☐	Outside Dimensions
☐	Grain	☐	Over/Under tolerance
☐	Weld	☐	Part Incorrect
☐	Wrong Stock Pulled	☐	Part Lost/Missing
☐	Out of Sequence	☐	Part Moved
☐	Off-set	☐	Drawing
☐	Mislabeled	☐	Finish
☐	Fit/Function	☐	Misread
☐	Misaligned/off center	☐	Turning Sequence

2 to Small Fab

Part Specifications				
MS21043-3	24	727	0	0
NAS1149C0363R	60	165	0	0
D2690-6	12	13	0	0
D5359-5	6	2	0	0
D5359-7	6	5	0	0
MS17984-C405	6	6	0	0
MS17984-C608	6	0	0	0
NAS509-6C	12	7	0	0

Specifications could not be found.

Plex 11/20/17 3:41 PM dart.poulin.mario

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							



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Job Sheet 168637



Part No: D5359-041

Job Qty: 2 ea

Part Name: Strut Assembly, LH/RH



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 11/20/17

Job Tracking No:

Due Date: 11/22/17

Created By: Mario Poulin

Type: SOLD

Description:

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Ship Via:

Bill of Materials

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Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	2 Ea	11/18/17	11/18/17	0.00	0.00	Start Up Container		
110	Small Fab	2 pcs	11/20/17	11/20/17	0.00	1.57	Small Fab		
112	CNC Bend Skidtubes	2 pcs	11/20/17	11/20/17	0.59	1.92	CNC Bend Crosstube		
114	Small Fab	2 pcs	11/20/17	11/20/17	0.00	1.57	Small Fab		
120	QC	2 pcs	11/20/17	11/20/17	0.00	0.00	QC5		
130	Mill Conv	2 pcs	11/21/17	11/21/17	0.00	2.28	Mill Conv 1		
140	QC	2 pcs	11/21/17	11/21/17	0.00	0.00	QC2		
150	QC	2 pcs	11/21/17	11/21/17	0.00	0.00	QC8		
160	Powdercoat	2 pcs	11/21/17	11/21/17	0.00	0.37	Powdercoat2		
170	QC	2 pcs	11/21/17	11/21/17	0.00	0.00	QC3		
180	Small Fab	2 pcs	11/21/17	11/21/17	0.00	1.57	Small Fab		
190	Mill Conv	2 pcs	11/21/17	11/21/17	0.00	2.28	Mill Conv 1		
200	QC	2 pcs	11/21/17	11/21/17	0.00	0.00	QC5		
210	Small Fab	2 pcs	11/22/17	11/22/17	0.00	1.57	Small Fab		
220	QC	2 pcs	11/22/17	11/22/17	0.00	0.00	QC5		
230	Packaging	2 pcs	11/22/17	11/22/17	0.00	0.00	Packaging3		
240	QC21-SA	2 Ea	11/22/17	11/22/17	0.00	0.00	QC21		

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114 - 1- TRIM OFF EXTRA MATERIAL USING DT10300 2- DEBURR

130 - 1- DRILL HOLES IN BOTH ENDS OF TUBE AS PER DWG 2- DEBURR

160 - START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____

180 - 1- ASSEMBLE INSERT IN TUBE AS PER DWG ***DO NOT INSTALL CLEVIS***

190 - 1- DRILL WITNESS HOLES TRUE BOTH WALLSW AS PER DWG, SHEET 2, DETAIL A AND VIEW B-B 2- DEBURR

210 - ASSEMBLE CLEVIS AND NUT AS PER DWG

Job Allocations					
Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M304TS0.750W.049	7	1,262	0	0
180-Small Fab	AN3CH11A	4	16	0	0
	AN3CH12A	4	20	0	0
	D5359-3	4	4	0	0
	MS21043-3	8	683	0	0
	NAS1149C0363R	20	161	0	0
210-Small Fab	D2690-6	4	104	0	0
	D5359-5	2	2	0	0
	D5359-7	2	5	0	0
	MS17984-C405	2	6	0	0
	MS17984-C608	2	10	0	0
	NAS509-6C	4	7	0	0
Part Specifications					
Specifications could not be found.					

Plex 11/23/17 10:24 AM Dart.Gagnon.Michelle

